

# PATENT ABSTRACTS OF JAPAN

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(21)Application number : 01-051767 (71)Applicant : NIPPON SHEET GLASS CO LTD

(22)Date of filing : 03.03.1989 (72)Inventor : SHIRATO RYUICHI  
MISONOO MASAO  
KAWAHARA HIDEO

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## (54) AMORPHOUS SOLAR CELL

### (57)Abstract:

**PURPOSE:** To obtain an amorphous solar cell having excellent plasma-resistant performance and high efficiency by specifying the ratios of respective diffraction intensity to the sum of three diffraction intensity regarding diffraction peaks from the three faces of 110, 200, 211 in the X-ray diffraction patterns of a transparent electrode mainly comprising tin oxide.

**CONSTITUTION:** The ratios of each diffraction intensity to the sum of three diffraction intensity are brought to values from 0.25 to 0.475 regarding diffraction peaks from the three, faces of 110, 200, 211 in the X-ray diffraction patterns of a transparent electrode mainly comprising tin oxide. That is, when SnO<sub>2</sub>:F is used as a substrate, the ratios of each peak intensity to the sum total of the three peak intensity of 110, 200, 211 of main peaks in the X-ray diffraction intensity of an SnO<sub>2</sub>:F film are kept within a range from 0.25 to 0.475 regarding the crystal orientation of the film. Accordingly, the substrate having excellent plasma-resistant performance is manufactured, and a solar cell displaying superior characteristics can be acquired.